



***RODDENBERRY.COM***

**#PRP1791**

# **Federation Mark VII Science Tricorder Prop Kit Assembly Manual**



Your kit has been manufactured for maximum allowable ease in assembly. Precision cut-outs have been made, including back door opening, hinge openings, countersunk hinge screw locations and back door screw holes. Scribed lines to assist in the placement of some parts have also been incorporated.

To further clarify the assembly steps, high-resolution versions of the photographs used in this manual are available at [EdMiarecki.com](http://EdMiarecki.com).



## PARTS INCLUDED IN KIT:

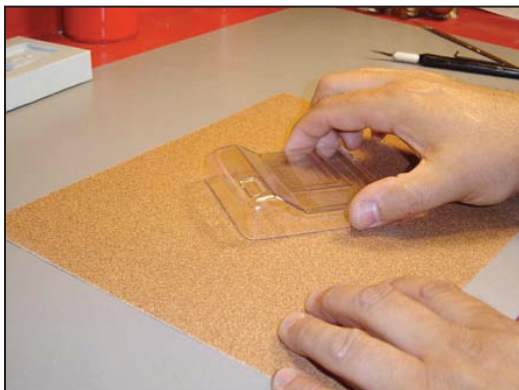
- (1) Tricorder body (two parts)
- (1) Tricorder bottom door (two parts)
- (1) Back door
- (1) Back door tab
- (1) Back door support frame assembly
- (2) Hinges
- (8) 4-40 flathead screws and nuts
- (1) Allen key
- (7) Internal assembly cleats
- (2) 4-40 button head screws
- (1) .020" hinge spacer shim
- (1) Omni-Scan Sensor Array
- (1) Screen graphic
- (1) White self-adhesive graphic sheet
- (1) Black self-adhesive mask and graphic sheet
- (1) Clear Contact paper
- (1) Red graphics
- (3) Gold graphics
- Bonus pack

## TOOLS NEEDED FOR ASSEMBLY:

- X-Acto knife or similar
- Straightedge
- Small flat screwdriver
- Scissors

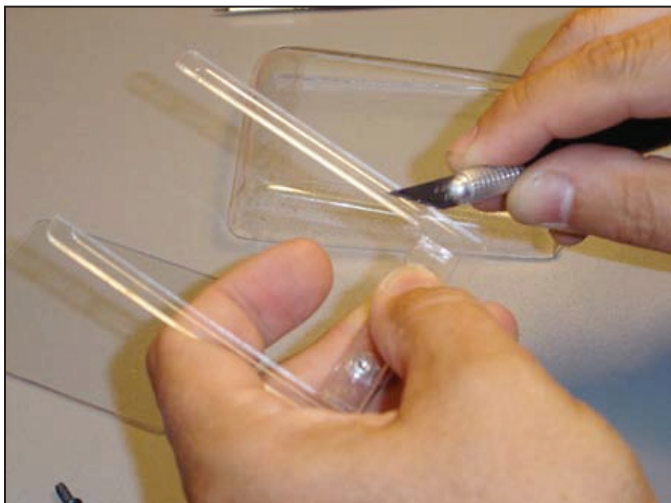
## SUPPLIES NEEDED FOR ASSEMBLY:

- Weld-on #3 acrylic solvent or similar
- Cyanoacrylate (Super glue, Krazy-glue, CA etc.)
- 60 grit sandpaper
- 180 grit sandpaper
- 320 finish sandpaper
- Automotive body filler (Bondo or similar)
- Automotive spot putty
- Paint brush
- Removable painting tape
- 5-minute clear epoxy
- Gray automotive spray primer
- Krylon Stone Gray spray paint #1605 (formerly known as Dove Gray)
- Krylon Bright Silver spray paint #1401
- Clear satin lacquer spray
- Flat Black spray paint
- Gloss dark gray paint
- Automotive body filler application tool



**Step 1:** Sand the back and front halves of the Tricorder body with 60 grit sandpaper until all high spots have been removed. Check the edge often; do not sand more than necessary. Remove any rough burrs by scraping the inside and outside edges with an XActo knife.

---



**Step 2:** Using X-Acto knife, scrape away sharp edges from perimeter of back door support frame assembly.

---

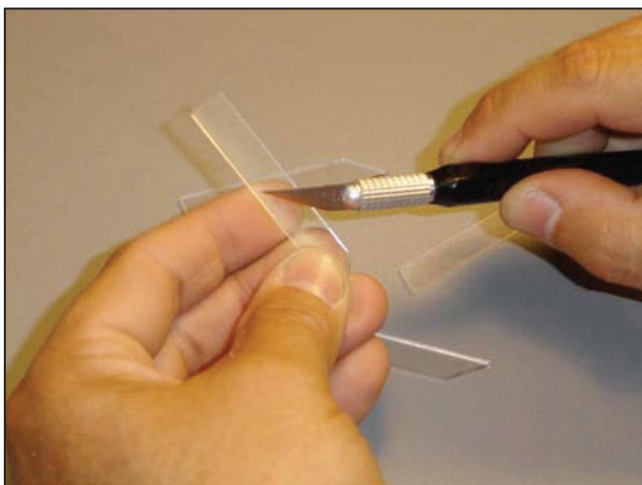


**Step 3:** Line up the scribed line on the back door support frame assembly with the opening on the back of main body, making sure that the encapsulated nuts are towards the angled end of body as shown. Solvent into place. Let dry thoroughly before proceeding to the next step.



**Step 4:** Temporarily screw the back door into position using two 4-40 button head screws and an Allen key.

---



**Step 5:** Using an X-Acto knife, scrape away the sharp edge from the perimeter of the back door tab and all cleats.

---



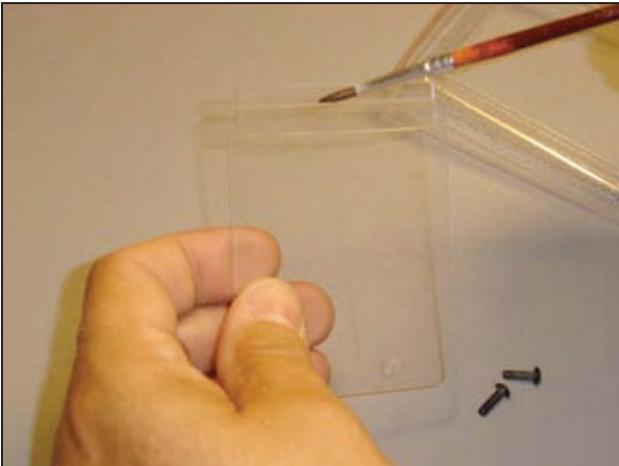
**Step 6:** Place the back door tab into place on back door using the scribed line as guide as shown.





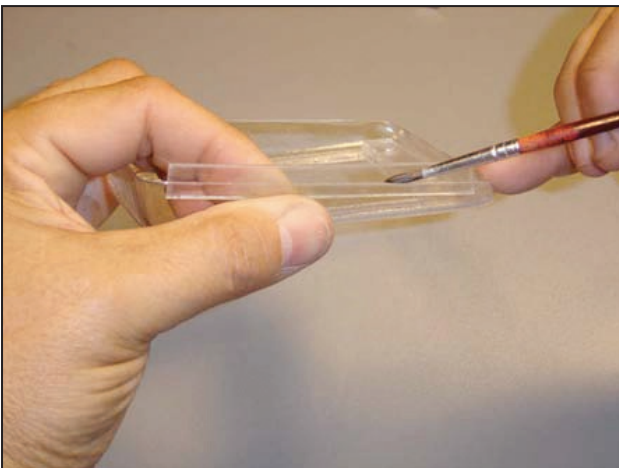
**Step 7:** Place a small amount of solvent at the center of the back door tab where it meets the back door to tack into place. **Caution! Do not use excessive solvent or capillary action will cause the back door to be permanently glued to the body.**

---

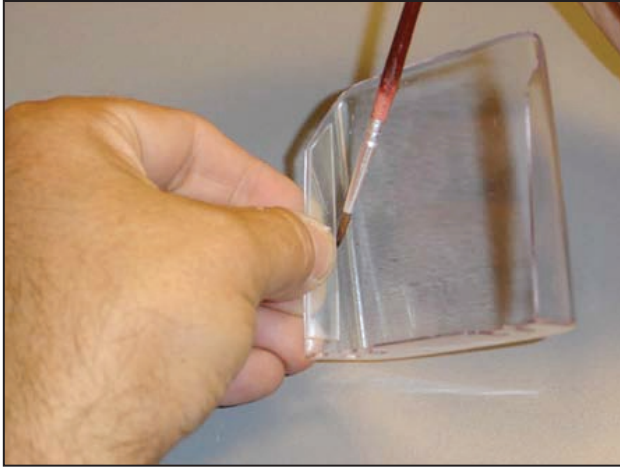


**Step 8:** Remove back door and finish applying solvent to the back door tab.

---

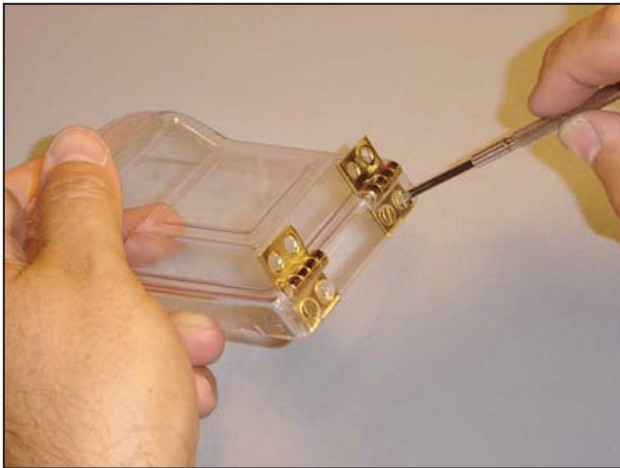


**Step 9:** Affix one each of 3-1/4" cleats to the inside of each side of the back of the tricorder body as shown. Be sure that the angled end of the cleat is towards the angled end of body.



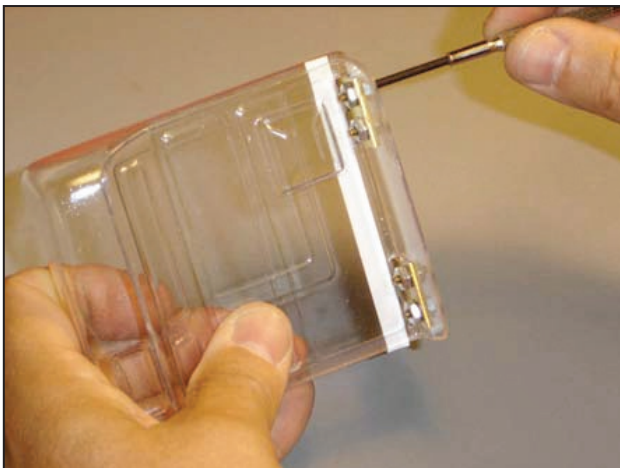
**Step 10:** Place a 2-1/4" cleat inside the edge of the outer bottom door as shown, lined up flush with the surface, and solvent into place. Repeat for the other side.

---

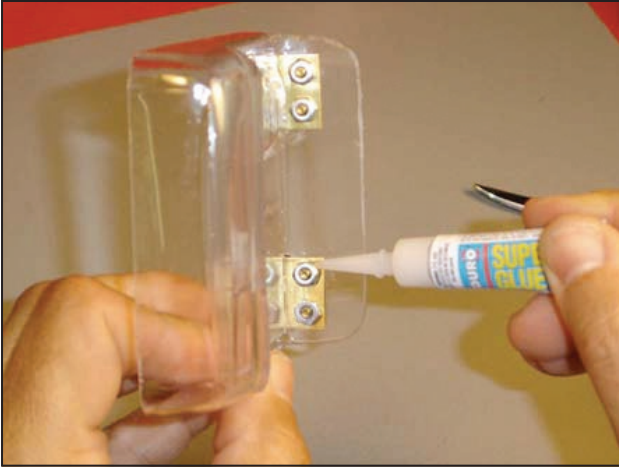


**Step 11:** Insert the hinges into the front of the body as shown, and screw snugly into place using four 4-40 flathead screws and nuts.

---



**Step 12:** Place the inside face of the bottom door onto the hinges as shown with .020" spacer shim. Screw snugly into place using four 4-40 flathead screws and nuts.



**Step 13:** Place a small amount of CA onto each of the eight nuts to affix to hinge, taking care not to get any glue on the screws.

---

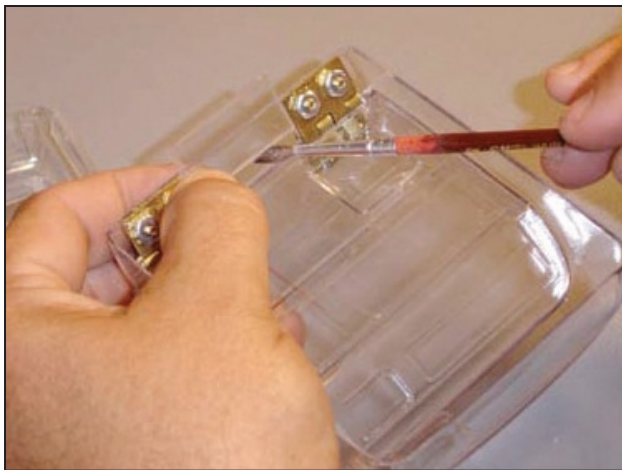


**Step 14:** After the CA has dried, loosen the four screws of the bottom door. Slip the outer bottom door into place in between the hinges and inner bottom door as shown. Retighten the screws.

---



**Step 15:** Solvent around the edges of the bottom door halves.



**Step 16:** Affix 1-1/4" cleat between the hinges with solvent as shown.

---



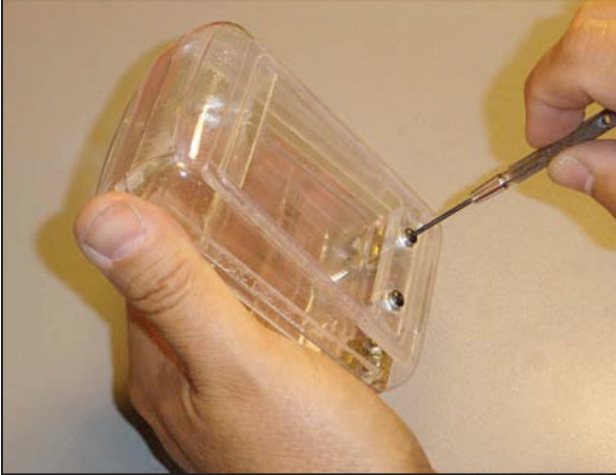
**Step 17:** Affix two mini-cleats to the front corners of the front half of the tricorder body with solvent 3/16" from scanner pocket edges as shown.

---



**Step 18:** Assemble the front and back halves of the Tricorder body together as shown. Solvent into place along both the inner and outer edges.





**Step 19:** Attach the back door.

---

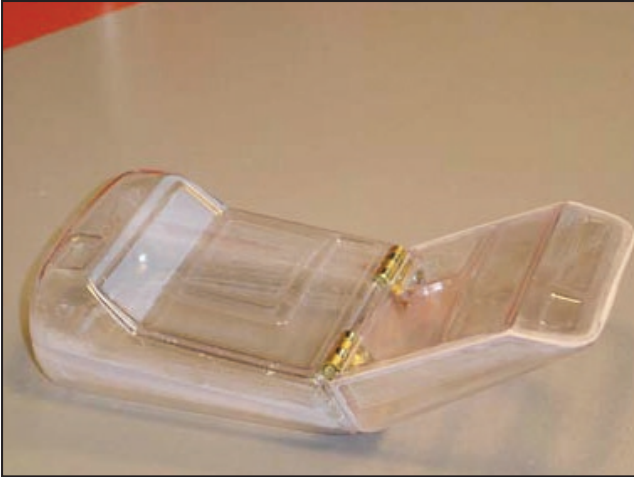


**Step 20:** Rough sand around the seams with 180 grit sandpaper to aid in adhesion of the body filler.

---

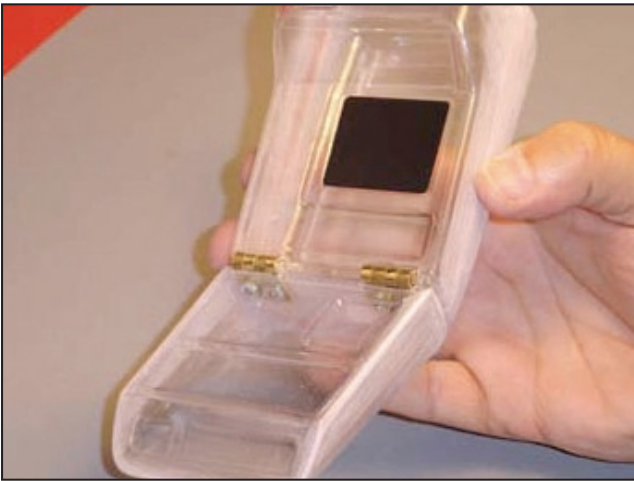


**Step 21:** Apply body filler to the seams, covering the heads of all eight flathead screws.



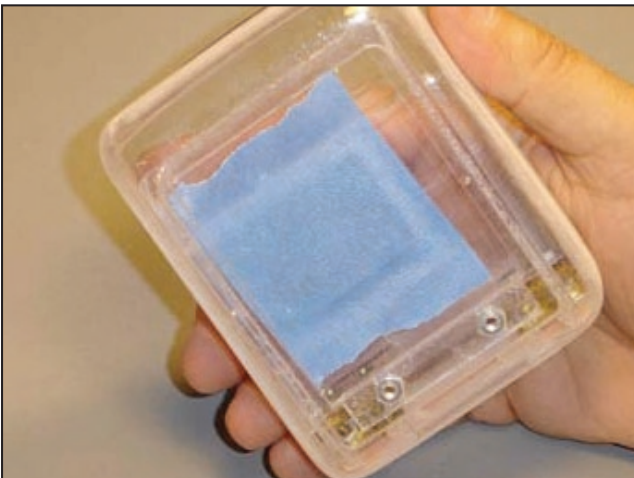
**Step 22:** Sand filler smooth. Repeat steps 21 and 22 if any imperfections remain.

---



**Step 23:** Apply 1-5/8" x 1-1/8" black screen mask to the screen centering on the depression.

---



**Step 24:** Cover the back of the screen from the inside of the body with removable painter's masking tape to protect it from any overspray.



**Step 25:** Prime the entire body with gray automotive primer.

---



**Step 26:** Fill any small imperfections with automotive spot putty. Sand the putty smooth.

---



**Step 27:** Spray the area of the EMRG recess flat black.





**Step 28:** Mask the EMRG area with the provided black 15/16" x 15/16" mask.

---



**Step 29:** Spray over everything with gray primer. Allow to thoroughly dry.

---



**Step 30:** Spray with base color, Krylon Stone Gray (formerly known as Dove Gray, color number 1605). Also spray the scanning register readout plate. Allow to dry.

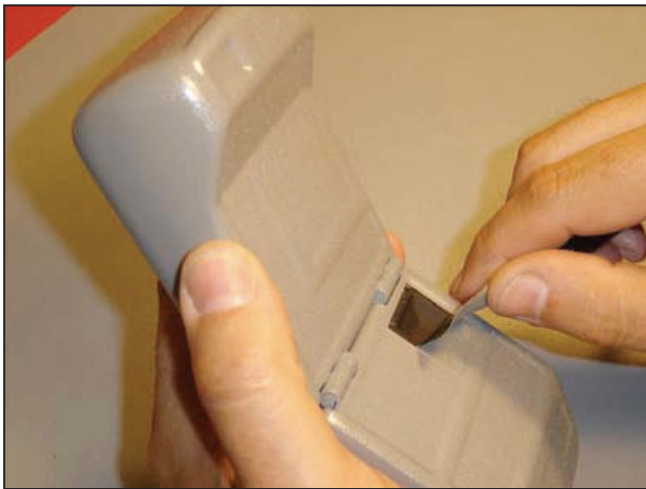




*\*Misting is a technique whereby the spray can is held 24" from the subject and short passes are made. The end result is a sparse coating of a second color over a base coat.*

**Step 31:** Apply a misting\* of Krylon Bright Silver, color number 1401, to both the Tricorder and scanner.

---



**Step 32:** Remove the EMRG mask.

---



**Step 33:** Apply clear satin finish.



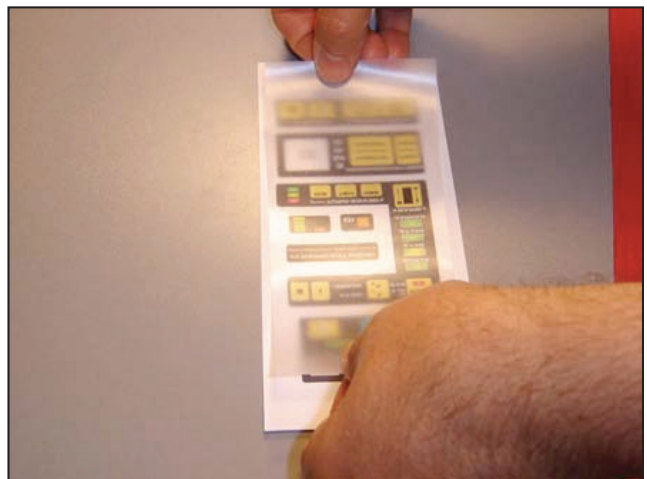
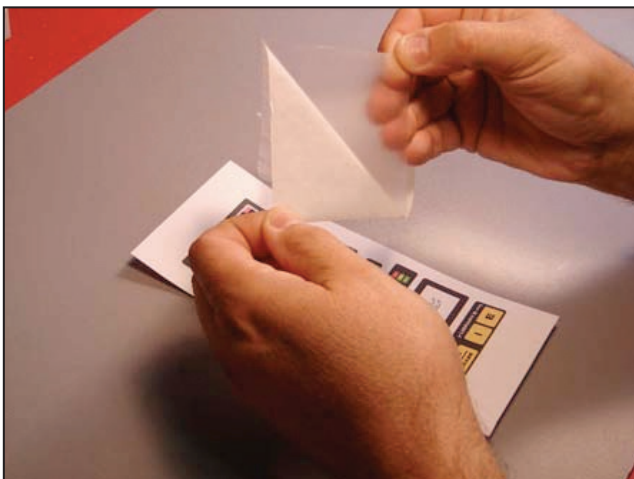
**Step 34:** Remove the screen mask from both sides of the screen.

---

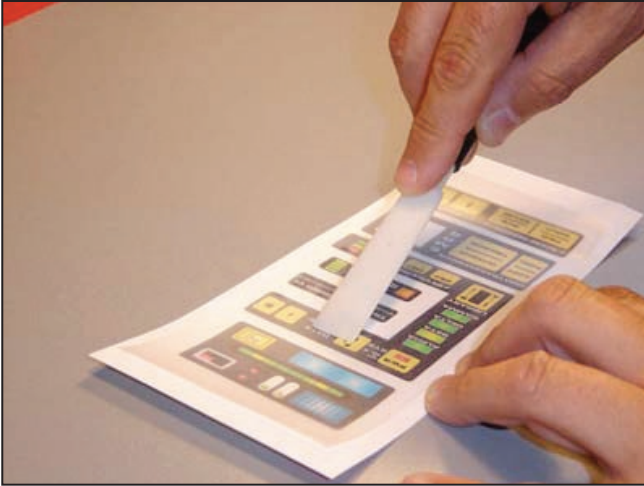


**Step 35:** Position the screen graphic and tape into position from behind.

---



**Step 36:** Apply clear protective Contact paper to the labels.



**Step 37:** Smooth the Contact paper over the labels to remove any air bubbles.

---



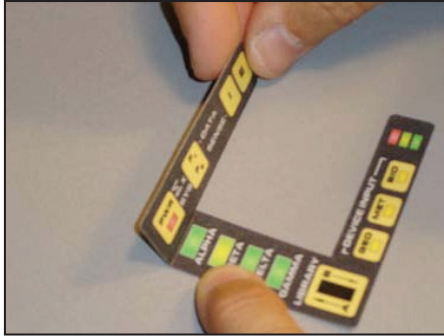
**Step 38:** Cut out the labels using a straight edge and X-Acto knife.

---



**Step 39:** Round the corners with scissors.





**Step 40:** Peel the backing from the labels and affix to the Tricorder as shown. To facilitate the application of the “C”-shaped label to the angled surface of the Tricorder, crease as shown.

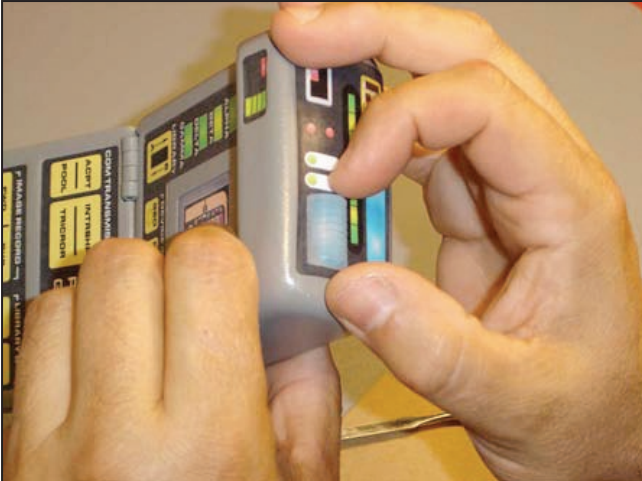


**Step 41:** Apply the red 3/8" x 5/15" graphic to EMRG recess.



**Step 42:** Apply the gold Pulse Refractor Plates to the Nanonic Field Sensor using the base graphic as a guide.





**Step 43:** Using 5-minute epoxy, affix the Omni-Scan Sensor Array to the base graphic as shown.

---



**Step 44:** Using 5-minute epoxy, affix the Inductive Lattice Matrix to the base graphic as shown.

---



**Step 45:** Apply the black graphics to the back end of the Tricorder as shown.



**Step 46:** Your Tricorder is complete and should look like this. Enjoy!

**IMPORTANT NOTES:**

The physical reproduction by any means known or yet to be invented (including molding and recasting, reverse-engineering, and stereo lithography scanning and printing) of the Roddenberry.com Federation Mark VII Science Tricorder #1791 or its parts and graphics; or reproducing/replicating any pre-existing products, parts, or graphics is **expressly prohibited** under U.S. and International copyright and product protection laws.

Copyright © 2009 Roddenberry Productions.

*Star Trek* and related marks and logos are Trademarks of CBS Studios Inc. All rights reserved.